PUBLIC INFORMATION & COMMUNICATION SERVICES (PICS)
NIH - TASK ORDER

RFTOP#: 239

TITLE: "Developing a Plan to Appropriately Assess the Needs for Training Tomorrow's Interdisciplinary Biomedical Imaging and Bioengineering Researchers"

IC: NIBIB

PART I – REQUEST FOR TASK ORDER (TO) PROPOSALS

A. POINT OF CONTACT NAME:

Deborah Coulter, Contract Specialist, Procurement Section, COB, DEA, NHLBI, Phone: (301) 435-0368 Fax: (301) 480-3345, email: coulterd@nhlbi.nih.gov

Debra C. Hawkins, Contracting Officer, Procurement Section, COB, DEA, NHLBI, Phone: (301) 435-0367, Fax: (301) 480-3345, email:hawkinsd@nhlbi.nih.gov

Proposal Address:
Procurement Section, COB, DEA, National Heart, Lung, and Blood Institute, National Institutes of Health, Rockledge Building 2, Suite 6042, 6701 Rockledge Drive, Bethesda, Maryland 20892-7902

Billing Address:
Accounts Payable, OFM, NIH, Bldg 31, Room B1B39, Bethesda, MD 20892-2045

B. PROPOSED PERIOD OF PERFORMANCE:

Six (6) months from the date of award.

C. PRICING METHOD:

Cost Plus Fixed Fee. NIBIB estimates approximately 563 contractor direct labor hours is estimated for the completion this project. If, in the opinion of the Offeror, that the estimated labor hours are insufficient to complete the required work or if significant improvements are available from additional funding, firms are requested to detail how available funds would be best spent, the amount and purpose of additional funds and any inefficiencies inherent in staging the project.

ESTIMATE OF EFFORT	
Labor Category	***Number of Hours***
Project Director	186
Research Associate	252
Information Specialist	95

Writer - Editor	30
TOTAL EFFORT	***563***

D. PROPOSAL INSTRUCTIONS:

Technical Proposals. Technical proposals should be no longer than twenty-five (25) pages in length and must be submitted to the POC at the address specified above. Proposals shall be in a printed (hard) copy with an original and two (2) copies of the technical proposal and an original and one (1) copy of the cost proposal. The offeror must also submit a signed task order form (last page of the RFTOP) with their proposal. Firms may submit proposals electronically via e-mail to Hawkinsd@nhlbi.nih.gov (with RFTOP # _____ – Proposal from name of firm in the subject line), or via facsimile. In both cases, Offerors must follow such proposal submissions with hard copies as specified above.

A detailed work plan must be submitted indicating how each aspect of the statement of work is to be accomplished. Your technical approach should be in as much detail as you consider necessary to fully explain your proposed technical approach or method. The technical plan should reflect a clear understanding of the nature of the work being undertaken. The technical plan must include information on how the project is to be organized, staffed, and managed. Information should be provided which will demonstrate your understanding and management of important events or tasks.

Plans which merely offer to conduct a program in accordance with the requirements of the Government's scope of work will not be eligible for further consideration. The Offeror must submit an explanation of the proposed technical approach in conjunction with the tasks to be performed in achieving the project objectives.

Your proposal, shall at a minimum address the following:

1. The technical proposal shall at a minimum describe the technical approach for fulfilling the requirements set forth in the SOW.

2. Provide at least three or more examples of needs assessments which you have performed in the past which demonstrate your technical ability in the design of needs assessments.

3. Provide at least three references which demonstrate your competency in the design of needs assessments using the tools similar to those required herein.

4. Resume of the key personnel that will be assigned to this needs assessment design and position descriptions of other individuals that may work on this project.

5. References shall be submitted in accordance with the following:

$ Contract Number, contract type and dollar value.
$ Date of contract award/completion.

$ Name, address, telephone numbers and e-mail addresses of applicable point of contact.

$ Brief description of contract work.

Cost / Business Proposals. The business proposal must contain sufficient information to allow the Government to perform a basic analysis of the proposed cost or price of the work. This information shall include the amounts of the basic elements of the proposed cost or price. These elements will include, as applicable, direct labor, fringe benefits, travel, materials, subcontracts, purchase parts, shipping, indirect costs and rate, fee, and profit.

Note the estimated level of effort in paragraph B. above.

The Contractor may use the direct labor hour estimates in their proposal.

Request for Clarifications. All requests for RFTOP clarifications will be accepted by Friday, February 11, 2005, 4:30 p.m. Requests for clarifications are to be submitted electronically to the Contract Specialist / Contracting Officer cited in Part I, paragraph A. above. Responses will be provided electronically by 4:00 p.m., Friday, February 18, 2005.

E. RESPONSE DUE DATE: Proposals are due by 4:00 p.m., local time on Friday, February 25, 2005.

F. EVALUATION FACTORS:

Your proposal shall be evaluated on the likelihood of meeting the Government's objectives. The evaluation shall be based on the technical and administrative capabilities in relation to the needs of the project/task and the reasonableness of costs shown in relation to the work to be performed. The following criteria are those that shall be applied in the evaluation of your technical proposal. The assigned weight of each factor is shown below:

Technical Factors

Corporate Experience 35

Ability to support the contract including resources with experience in study design, quantitative needs assessment, program evaluation, as well as successful experience that demonstrates an understanding of the organization and functions of the National Institutes of Health.

The contractor must submit a description of similar contracts completed during the past five years and all contracts currently in progress that are similar in nature to this SOW. The description should address experience in meeting customer requirements on time or ahead of schedule and delivering a product that performs according to customer expectations.

Technical Approach..... 40
Demonstrated understanding of the scope of work as shown by the technical approach proposed. Includes an appropriate mix of staff, proposed standard operating procedures, procedures for responding to changes and unanticipated needs, and a discussion of any anticipated problems and recommended approaches for their resolution.

Management Plan 25
Proposed method of assuring the achievement of timely and acceptable performance of the work, as well as the proposed method for administration of costs relevant to this contract.

Total Possible Points**.....**

<u>Cost / Price Factors</u>:
Cost / Price is not a weighted evaluation factor. A basic analysis of the proposed cost or price of the work will be performed to determine the relative merits of the Offeror's proposal and in selecting the Offeror whose proposal is considered to offer the best value to the Government.

G. TASK DESCRIPTION:

1. Introduction

The National Institute of Health (NIH) National Institute of Biomedical Imaging and Bioengineering (NIBIB) was created by the Congress of the United States on December 29, 2000 through Public Law 106-58. The mission of the NIBIB is to improve health by promoting fundamental discoveries, design and development, and translation and assessment of technological capabilities in biomedical imaging and bioengineering, enabled by relevant areas of information science, physics, chemistry, mathematics, materials science, and computer sciences. The Institute coordinates with biomedical imaging and bioengineering programs of other agencies and NIH institutes to support imaging and engineering research with potential medical applications and facilitates the transfer of such technologies to medical applications. The NIBIB Training Program goals are to support interdisciplinary programs of research training and career development that incorporate the biological, physical, and engineering sciences, at the cutting edge of technology development.

The purpose of this requirement is to hire a contractor to conduct a needs assessment study of interdisciplinary research training and career development programs in biomedical imaging and bioengineering. It is anticipated that the NIBIB overall training and career development programs will double in the next 5 years. We are at a critical point in defining our training needs, especially as our training (T-series), fellowship (F-series), and career development (K-series) programs grow. Project oversight will be performed by the NIBIB.

2. Background

The NIBIB held an initial training workshop on August 2002 to assess program development needs of the Institute. Among its recommendations was a formal needs assessment to provide a basis for the Institute's training programs. It is also important to note that the National Research Council's (NRC) Personnel Needs for the Biomedical and Behavioral Sciences Committee (funded by NIH every four years to assess the NRSA program) generally does not look at current workforce needs by specific fields (e.g., BMI and BME) and when it has done so, it has only targeted nursing, dentistry, and health services research. There is a clear and present need to define the NIBIB niche within the NIH training enterprise, in order to be responsible to our Congressional mandate, better serve our stakeholders (scientists and the public), and coordinate with training activities at other Institutes and Centers.

The Program to be evaluated is the NIBIB Training and Career Development Program. NIBIB is located in the Democracy II Building, 6707 Democracy Boulevard, Bethesda, MD 20892. The Training and Career Development programs are relatively small but growing. The estimated numbers and dollars for FY 2004 are included below:

$ Training and Fellowships: Twenty-one (21) T32 programs supporting 71 Predoctoral and 46 postdoctoral trainees, and four (4) F32 fellowships. The overall training budget is approximately $6.5 million.

$ Career Development Awards: K01 (4), K02 (1), K08 (2), K23 (2), K24 (2), and K25 (4) awards. The total career budget is approximately $2.5 million.

$ Research Supplements to Promote Clinical Resident Research Experiences: New initiative for FY 2005 to provide research opportunities during residency in order to increase the numbers of residents entering and remaining in NIBIB-focused research careers. The anticipated budget is $1 million.

The NIBIB Training goals are to develop and support interdisciplinary programs of research training and career development that integrate the physical, engineering, and life sciences. The intent of these programs is to:

$ Provide more opportunities than currently exist for bioengineering and bioimaging training using existing NIH mechanisms and creative approaches.

$ Develop flexible training programs so as to be maximally responsive to future training needs; for example, graduate curriculum development for interdisciplinary research.

$ Increase communication and outreach to inform the community of the latest programmatic developments at the Institute and to provide better assistance in developing new programs.

$ Fill critical gaps across the career continuum and attract students to research careers in bioengineering and bioimaging.

$ Enhance participation of under-represented populations in biomedical imaging and bioengineering research.

3. Description of Work

The contractor will identify and integrate what is known about the questions listed below using such data sources as the NIH Consolidated Grant Applicant and Fellow File, NIH Trainee and Fellow File, NSF-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering, Doctorate Records File, NSF-NIH Survey of Doctorate Recipients, Association of American Medical Colleges Faculty Roster System, along with other studies/data bases that are available (e.g., the Whitaker Foundations survey of the 1,200 or so biomedical engineers who had received grants from the foundation and the Curriculum Database that is available through BME.net).

The following questions must be answered:

3.1. Assessing Current and Future Training Needs:
How can we best address future personnel needs, and what numbers and dollars are needed to achieve the NIBIB goals of supporting interdisciplinary programs of research training and career development? Leaders in the BMI and BME research and training communities, along with NIBIB and other relevant NIH leaders need this information to guide decisions and policies about NIBIB training efforts. The relevance of each question to the Program goals above is emphasized.

a. What are the estimated numbers of biomedical imagers and bioengineers currently conducting research in areas related to the mission of the NIBIB? (Relevant to Program goals 1 and 2).

b. What are the numbers of individuals conducting bioimaging and/or bioengineering research that are trained in other disciplines? (Relevant to Program goal 2).

c. What are the sources of support for the current researchers in biomedical imaging and bioengineering? For example, with the anticipated phasing out of the Whitaker Foundation's grant programs, demand for NIBIB supported training activities is anticipated to increase dramatically. (Relevant to Program goal 3).

d. What mechanisms are currently being used for training young investigators in these disciplines? (Relevant to Program goals 2, and 3).

e. Where are the currently successful, funded, interdisciplinary researchers, academia and Industry? What were their paths to success? What were their support sources? (Relevant to Program goal 4).

f. How is the current BMI and BME research workforce distributed across employment sectors, and how has this changed over time? That is, along with knowing how large the workforce is, one needs to know its employment patterns. (Relevant to Program goal 4).

g. Given NIBIB's training goals mentioned above, what is the current participation of underrepresented populations in BMI and BME research and how this has changed over time? (Relevant to Program goal 5).

3.2. **Study Design** – The needs assessment of NIBIB's interdisciplinary training programs will use data from a number of existing sources to describe the characteristics (skills, education and training, grant history) of the workforce. This study will focus on researchers who conduct interdisciplinary research that requires collaboration between the quantitative and biomedical sciences. Information will also be obtained from a group of leading researchers to further characterize the leaders in this group by identifying patterns in training, educational field(s) of study, degrees, and other factors. A description of the workforce along with an analysis of the factors associated with highly successful researchers in program areas targeted by NIBIB will establish a foundation for the identification of future training, program activities, and program evaluations. It will also contribute data and provide insight into potentially important factors in interdisciplinary research.

Data will be obtained from successful researchers through informal discussions conducted either in person or by telephone. OMB clearance would not be needed since no more than nine researchers would participate. A discussion guide would include items to obtain information on educational focus, degrees, specific training, career paths, grant award history, and individual input on other factors that might be associated with their success.

There are several existing sources of data that must be used to address the study questions and characterize the workforce of current researchers and provide information on educational field(s), sources of support, and grant history. These include:

$ NIH Consolidated Grant Applicant and Fellow File (CGAF)
$ NIH Trainee and Fellow File (TFF)
$ National Science Foundation (NSF)-NIH Survey of Graduate Students and Postdoctorates in Science and Engineering (graduate student survey)
$ Doctorate Records File (DRF)—a file of all research doctorates who graduated from accredited U.S.institutions of higher education derived from the NSF-NIH Survey of Earned Doctorates
$ NSF-NIH Survey of Doctorate Recipients (SDR)—a biennial, longitudinal survey of a sample of individuals with records in the DRF

$ Association of American Medical Colleges (AAMC) Faculty Roster System (FRS)—a file of full time medical school faculty

Other sources of existing data might include professional organizations, scientific societies, and foundations (Burroughs Wellcome Fund, Whitaker Foundation, Howard Hughes Medical Institute, and Sloan Foundation). Information that cannot be easily obtained or that may not be available will also be identified.

3.3. Special Security Requirements for Database Access

The NIH data sources that must be used in this evaluation have stringent security clearance requirements. In particular, the CGAF and TFF files contain personal data on race and ethnicity that are extremely restricted and require access security clearance at a level above that of the IMPACT II Database System which they support. All Contractor employees who work directly with these files must have satisfactorily completed a "Limited Background Investigation" initiated through the NIH Office of Extramural Research (OER).

4. Deliverables and Schedule

The contractor shall be responsible for providing the following deliverables:

1. Identify and analyze what is known about the questions listed in 3.1. (Assessing Current and Future Training Needs) using the data sources listed in 3.2. (Study Design).
2. Prepare a final project report that presents data in table and graph or chart format, along with a discussion of findings, limitations, and recommendations for future evaluation based on an analysis of collected data.
3. Provide monthly updates to the Contracting Officer's Technical Representative(s) via email and or phone conversations.
4. Provide a preliminary report by June 30, 2005.
5. Participate in NIBIB-sponsored workshop on training needs in September 2005.

5. Inspection of Work

5.A. Inspection and acceptance of all work shall be by the Contracting Officer's Technical Representative (COTR). NIBIB will conduct a review of the contract deliverables for completeness, correctness, and compliance with the requirements herein. If NIBIB determines that there are omissions, errors, or deficiencies, the contractor shall make the necessary modifications that will allow NIBIB to accept the final products. The corrections shall be made within a period of time agreed upon by NIBIB and contractor through negotiations and to be set forth in a contract modification at no additional cost to NIBIB.

5.B. Performance of the work shall be subject to technical surveillance of representatives of NIBIB as assigned. As

used herein, Technical Surveillance is instructions to the contractor that fill in details, suggest possible lines of inquiry, or otherwise complete the general scope of work, but do not constitute a new

H. PERIOD OF PERFORMANCE

Six (6) months from date of award.

I. CONTRACT ADMINISTRATION DATA

The following Project Officer(s) will represent the Government for the purpose of this contract:

Meredith D. Temple-O'Connor, Ph.D., Acting Director, Division of Inter-Disciplinary Training, NIBIB/NIH
6707 Democracy Blvd, Suite 200
Bethesda, MD 20892-5477
Phone: (301) 451-4792, Fax: (301) 480-4973, Email: templem@mail.nih.gov

Henry Khachaturian, Ph.D., Alternate Project Officer, National Institute of Biomedical Imaging and Bioengineering
6707 Democracy Boulevard, Suite 200, MSC 5477
Bethesda, MD 20892-5477
Phone: 301-402-1486, Fax: 301-480-1614, Email: hk11b@nih.gov

The Project Officer is responsible for: (1) monitoring the Contractor's technical progress, including the surveillance and assessment of performance and recommending to the Contracting Officer changes in requirements; (2) interpreting the Statement of Work and any other technical performance requirements; (3) performing technical evaluation as required; (4) performing technical inspections and acceptances required by this contract; and (5) assisting in the resolution of technical problems encountered during performance.

The Alternate Project Officer is responsible for: (1) monitoring the Contractor's deliverables; (2) tracking and approving invoices submitted for payments; (3) other administration tasks as required.

The Contracting Officer is the only person with authority to act as agent of the Government under this contract. Only the Contracting Officer has authority to: (1) direct or negotiate any changes in the Statement of Work; (2) modify or extend the period of performance; (3) change the delivery schedule; (4) authorize reimbursement to the Contractor any costs incurred during the performance of this contract; or (5) otherwise change any terms and conditions of this contract.

The Government may unilaterally change its Project Officer designation.

J. KEY PERSONNEL

Pursuant to the Key Personnel clause incorporated in this contract, the following individual(s) is/are considered to be essential to the work being performed hereunder:

Name	**Title**
[TO BE DETERMINED UPON TASK ORDER AWARD]	

K. INVOICE SUBMISSION

1. The Contractor must submit an original, separate, itemized invoice for each order for supplies or services.

2. Invoices shall <u>not</u> be submitted until goods have been received or services performed.

3. An invoice must be submitted for each partial payment requested.

4. The invoice shall be prepared in ink or typewritten as follows:

a. Paying office and address
b. Invoice Number
c. Date of Invoice
d. Contract Number
e. Period of Performance
f. Payee's name and address. Show the Contractor's name (as it appears in the contract), correct address, and the title and phone number of the responsible official to whom payment is to be sent. When an approved assignment has been made by the Contractor, or a different payee has been designated, then insert the name and address of the payee instead of the Contractor.
g. Description of goods or services, quantity, unit price, (where appropriate), and total amount.
h. Charges for freight or express shipments other than F.O.B. destination. (If shipped by freight or express and charges are more than $25, attach prepaid bill.

5. The Contractor shall submit an original and one (1) copy of the invoice to the National Institutes of Health, Commercial Accounts, Room B1B32, 31 Center Drive, MSC 2045, Bethesda, Maryland 20892-2045.

6. The Contractor shall submit a photocopy of the invoice by mail or faxed directly to the ***Project Officer***.

7. The Contractor shall submit a photocopy of the invoice by mail or faxed directly to the ***Contract Specialist*** .

8. The Project Officer will review, approve / deny, and forward the approval to the Contracts Office.

9. Inquiries relating to payment may be made directly to: Commercial Accounts, Telephone: (301) 496-6088

10. All NIH contracts are expressed in United States dollars. Where expenditures are made in a currency other than United States dollars, billings on the contract shall be expressed, and reimbursement by the United States Government shall be made, in that other currency at amounts coincident with actual costs incurred. Currency fluctuations may not be a basis of gain or loss to the Contractor. Notwithstanding the above, the total of all invoices paid under this contract may not exceed the United States dollars authorized.

RFTOP#239

TITLE: "Developing a Plan to Appropriately Assess the Needs for Training Tomorrow's Interdisciplinary Biomedical Imaging and Bioengineering Researchers

PART II - CONTRACTOR'S REPLY:
CONTRACT #263-01-D-0_____ TO # NICS-_____

Contractor:
Points of Contact:
Phone:
Fax:
Address:

TOTAL ESTIMATED COST: Pricing Method:
TOTAL ESTIMATED NUMBER OF HOURS:
PROPOSED COMPLETION DATE:

FOR THE CONTRACTOR: _____
Signature Date

SOURCE SELECTION:

WE HAVE REVIEWED ALL SUBMITTED PROPOSALS HAVE DETERMINED THIS FIRM SUBMITTED THE BEST OVERALL PROPOSAL AND THE PRICE/COST IS REASONABLE.

Billing Reference #: _____
Appropriations Data: _____
(ATTACH OBLIGATING DOCUMENT IF AN ROC WILL NOT BE USED.)

RECOMMENDED: _____
FAX # Signature - Project Officer Date

APPROVED:

_____
FAX # Signature - Contracting Officer Date

NIH APPROVAL -
CONTRACTOR SHALL NOT EXCEED THE ESTIMATED LABOR HOURS OR ESTIMATED TASK ORDER AMOUNT WITHOUT THE WRITTEN APPROVAL OF THE CONTRACTING OFFICER & PICS COORDINATOR

APPROVED:_____

Signature – Larry Manning, NIH-PICS Coordinator Date